

Session 3-R: Cataract/Refractive: Presbyopia, IOLs, New Technology

Title: Measuring Accommodation in Patients with Presbyopia, No Presbyopia, Standard IOL, or Accommodating IOL

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PURPOSE: To study three methods of measuring accommodation in each of four groups of patients: presbyopes, non-presbyopes, pseudophakes with monofocal IOL, and pseudophakes with accommodative IOL.

METHODS: A total of 40 eyes were tested for accommodative function using the Wavefront Sciences Aberrometer, the Trace Technology Aberrometer, and the standard push-up test. The 40 eyes were in 4 groups of 10 each: 1) normal presbyopes; 2) normal non-presbyopes; 3) patients with monofocal IOL; and 4) patients with CrystaLens accommodative IOL. Differences between the three methods were studied for each of the groups, as well as differences between each group.

RESULTS: Outcomes as well as the mechanism of measurement for the Wavefront Sciences Aberrometer and the Tracy Technology Aberrometer will be discussed with respect to comparison with the standard push-up test.

CONCLUSIONS: There have been major attempts in ocular surgery to relieve presbyopia and improve accommodation. Without appropriate measuring devices it is difficult to assess the success of these attempts.